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ABSTRACT

The OCCUPAC Project consists of the development of multi-media career education materials, with an emphasis on simulated real-life experiences in the classroom. Existing occupational clustering systems have little meaning for the kindergarten through sixth grade career education curriculum, because they are based on adult logic. A special Child-Developed Clusters Component takes into account that the study of occupational areas in early grades must capitalize on the prior experience and current cognitive development of the children. During the primary grades a career education curriculum should allow for many success experiences with concrete objects that have been selected primarily for their relationship to the prior experience of the child and should also include new experiences. In the past we have often failed to take stock of how children learn, and we now need to focus our resources on developing materials which will help students learn how to become the individuals they want to be and are capable of being. (CD)

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CAREER EDUCATION IN THE ELEMENTARY SCHOOL

Paper presented to

Office of Education Vocational Association
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by

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I think that it is perhaps in order today to discuss the history of elementary school career education at Eastern Illinois University. My remarks, by the way, will be limited to grades K-6.

In August, 1970, the Professional and Curriculum Development Unit of the Illinois Division of Vocational and Technical Education funded a career education materials development project which was located on our campus. This project has subsequently come to be known as the OCCUPAC Project. The OCCUPAC Project takes its name from the OCCUPACS--the multi-media packages of career education materials that were developed by the project staff.

The OCCUPAC Project staff consisted of a full-time director who had an elementary school guidance and counseling background, one half-time graduate assistant in audio-visual education, one half-time graduate assistant in elementary school education, and most important of all--three elementary teachers and two junior high school teachers from Buzzard Laboratory School. These five classroom teachers served as consultants to the project. It should be noted that these Buzzard Laboratory School teachers had taught in a variety of public school settings and they had been hired for their ability to teach children, teach future teachers of children, and translate theory into practice.

We are quite proud of the fact that from the beginning of our elementary school career education efforts, we have had elementary education, elementary teacher education, and counselor education personnel involved in what we are doing. In fact, two of the elementary teachers, who served as consultants on the OCCUPAC Project, Dr. Ann Jackson and Dr. Carl Tausig, are now serving as full-time staff members on our new career education curriculum effort which is funded by the Curriculum Center for Occupational and Adult Education, United States Office of Education.

Although I will address most of my comments today to this new curriculum effort, I want to stress that many of the beliefs that we held about how children learn, how career education should be infused into the elementary school curriculum, etc. when we began the OCCUPAC Project are still guiding us as we

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prepare curriculum guides and prototype instructional materials for the Enrichment of Teacher and Counselor Competencies in Career Education Project (we have shortened this title to ETC.)--our new curriculum effort.

Before leaving the OCCUPAC Project completely, I do want to discuss the main purpose of the project. When we began the OCCUPAC Project, we felt that there was a need to experiment with alternative types of K-6 career education instructional materials and teaching strategies. From our knowledge of child growth and development, we knew that a developmental learning sequence for this age of child proceeds from the concrete and experientially close to the abstract and experientially remote and from tasks requiring simple thought processes to those requiring abstract and formal reasoning.

It seemed quite logical to us that career education could lend itself to a "hands on" approach. Therefore, our ultimate objective in the OCCUPAC Project was to develop an alternative approach to career education which provided for "hands on" learning within the school setting. This should not be interpreted to mean that the staff rejected all approaches which involved printed instructional materials or out-of-school learning experiences. Rather, it should be interpreted that the staff felt there was need for experimentation with an approach that involved simulated real-life experiences in the classroom.

We feel that we have made only a modest beginning toward experimenting with simulation in the elementary school classroom. Our approach involves the heavy use of manipulatives that we have either designed and built in the industrial arts and instructional materials centers at Eastern Illinois University or manipulatives that have been drawn from various occupational areas.

An examination of the K-3 Electrician OCCUPAC (OCCUPACS by the way are built around specific occupations and I will discuss later why specific occupations have a legitimate place in the elementary school classroom) will help you understand what is contained in an OCCUPAC. The first activity in the Electrician OCCUPAC is a slide-tape presentation on the work of an electrician. The child inserts a cassette tape into a recorder and places a stack of slides in a hand viewer. The tape tells the child when to insert slides.

The taped commentary which accompanies the slides follows the OCCUPAC Model: What does the worker wear? Where does he work? What tools or equipment does he use? What do you suppose made him choose this work? Does he like to climb in high places? Do you like to climb in high places? Who does he work with? How does his work help other people? Can women be electricians? etc.

In addition to the slide-tape presentation, three more activities accompany the OCCUPAC. Each of these three activities involves a wiring activity. The cassette tape supplies the directions. For example, the tape says, "There's a tool belt in the OCCUPAC. Take this tool belt out of the OCCUPAC and fasten the belt around your waist." The child then proceeds to put on the tool belt and take the necessary wires, bulbs, batteries, etc. out of the OCCUPAC. As the child puts on the electrician's tool belt and as he performs some of the work of an electrician, he begins to test some of his feelings about this kind of work. The tape, of course, points out that this is not the only work the electrician performs, but it is the work which is performed most often by an electrician.

In summary, our approach is to have the elementary school child work with the "real thing." However, we need experimentation with other types of simula-

tion. For example, are manipulatives that are flat, two-dimensional representations of tools, equipment, working environments, etc. effective with K-6 children? Would the reduced cost of this type of material be so great that it would offset a slight loss of learning? In other words, what are the cost-benefits of various types of simulations? Our project staff would like to see much more research done on simulation and roles testing in the elementary school classroom.

Our staff feels strongly that research monies should be expended in the area of looking for these types of alternative instructional materials and teaching strategies. In our recent review of instructional materials that are available for use in elementary school career education programs, we have found several sets of materials that relate to self development. We do not need additional research projects that turn out products that are already commercially available. We need research projects that will help devise new procedures and methods for integrating self development with other facets of career education, and we need research projects which help infuse career education concepts with subject matter content that is taught in the elementary school.

This last statement has finally brought me to the topic of The Enrichment of Teacher and Counselor Competencies in Career Education Project. In the ETC project we are planning to develop, evaluate, and disseminate career education curriculum guides that are applicable to any school with grade levels functionally equivalent to K-6 and which will fuse career education concepts with subject matter concepts in the areas of mathematics, science, language arts, and social studies. We also plan to develop, implement, evaluate, and disseminate sample teaching-learning modules to accompany the guides. The staff is currently working on a definition of "infusion" and a definition for "career education" for the ETC project.

Learning theory, career development theory, child growth and development theory, and curriculum development theory all have to be brought together in order to form a curriculum that is best for students and that can be used by teachers and counselors.

We are relying heavily upon the work of Jean Piaget for our learning theory and our child growth and development theory, on the work of Hilda Taba for our curriculum development theory, and on the work of Donald Super for our career development theory.

The work of Piaget has given us a basis on which we can deal with the various occupational clustering systems that are now in existence. Our curriculum model includes a Child-Developed Clusters Component and an Adult-Imposed Clusters Component. (See Appendix A)

An examination of existing occupational clustering systems revealed that they have little meaning for the development of kindergarten through sixth grade career education curriculum. The various clustering systems represent organizational plans that have meaning for adults but little meaning for children.

This phenomenon is partially caused by the fact that the child's mind is internally consistent; yet, externally it appears to the adult as illogical. Piaget treats this subject when he discusses equilibrium. He says that in general, the structures associated with the earlier stages of intellectual development tend to be characterized by less stable equilibrium, in that the probability

of their modification through new experience is relatively high. As the structures evolve, they come into increasingly stable equilibrium, until those which have developed by the time the individual reaches the level of formal thought at around fourteen years of age, will undergo little fundamental modification throughout the remainder of his lifetime.

This does not necessarily imply that all forms of intellectual development reach a plateau at this approximate age level. It only reflects Piaget's conclusion that the fundamental structures associated with this particular form of thought tend to be present by then.

The Child-Developed Clusters Model takes into account that the study of occupational areas in the early grades must be based upon a set of environmental conditions in which the teacher and curriculum materials together represent an education strategy capitalizing on the particular prior experience and current cognitive development of children. The teacher can elicit from the child those occupational areas that are within the child's realm of understanding. The resulting clusters may seem very unsystematic to the adult mind, but to a 5, 6, or 7 year-old child, the clusters have meaning.

The model also takes into consideration that the child is perceptually oriented; he makes judgments in terms of how things look to him, and he often focuses on one variable only. Usually the variable is one that stands out visually. In summary, during the primary grades a career education curriculum should allow for many success experiences with concrete objects that have been selected primarily for their relationship to the prior experience of the child and should also include some experiences which are not within his experential background. The time for a greater amount of imposed materials will come at a later stage of intellectual development.

Too often educational strategies have moved children too abruptly from a world of finding out, testing, and manipulation to a world of adult-imposed symbolic and verbal manipulations which organize knowledge for the child. Thus, our model is providing for a transition stage at the 3-6 grade level when the curriculum directly provides for experiences which are "child-developed" and "adult-imposed." In general, this is also the stage when the transition from concrete-dominated functioning to a state dominated by abstract cognitive functioning begins to take place. This transition is not uniform among the various subject matter content that is encountered by the child. The transition from concrete-dominated to abstract-dominated cognitive functioning takes place specifically in each separate subject-matter area and is dependent upon the child's previous experience with the content under study. It should be noted that although the K-2 levels have been designated as levels dominated by concrete functioning, this does not mean that such functioning is totally superseded by the more mature symbolic and formal functions. Likewise, by designating the 3-6 levels as levels when symbolic functions are dominant, this does not mean that concrete or abstract functions are non-existent.

Traditionally there has been more symbolic learning involved when adult-conceived structures and content are imposed upon children. Therefore, the child has to be cognitively ready to deal with symbolic learning before adult-imposed systems can have meaning for him. The 3-6 grade child who has moved from concrete-dominated experiences to a readiness for dealing with more symbolic learning is ready to begin to accept clusters of occupations that have been developed in logical schema by adults.

The 3-6 grade years, then, are years that are marked by experiences that are discretely concrete, experiences that are discretely abstract or symbolic, and experiences that involve various combinations of abstractness and concreteness. It is important to emphasize that these learning modes are continued throughout a lifetime: an individual continues to undergo the same transition from concrete to abstract cognitive functioning in each new subject matter area he encounters--even after he reaches the abstract-dominated stage of development on an overall basis.

The model then allows for the movement of these learning modes into the stage of development where learning becomes more formal and where adult-imposed clusters of occupations have a more logical placement. This stage of development generally occurs at about the time of entry into 7th grade and continues at higher levels of sophistication throughout a lifetime.

I said earlier that much of our career development theory is based on the work of Donald Super and much of our curriculum development theory is based on the work of Hilda Taba. In a few minutes I will discuss how these two theories interact to form a basis for the development of instructional programs.

From Taba we learned that a good curriculum will be addressed to multiple objectives. The four categories which Taba outlines are: (1) basic knowledge; (2) thinking; (3) attitudes, feelings, and sensitivities; and (4) skills. Let us look briefly at how Taba subdivides the category of basic knowledge into three areas (a) basic concepts; (b) main ideas; and (c) specific facts. She says the basic concepts are high level abstractions and are the threads that occur and reoccur in connection with different content. They are of sufficient importance and complexity to serve as threads throughout the entire program. An example of one of these threads for career education programs is, "The student will learn about himself in relation to his culture through understanding and experiencing roles."

After the basic concepts or threads have been determined, the main ideas which represent important generalizations are determined. An example of a career education main idea is, "The student will recognize the role of each family member."

After the main ideas have been determined, then specific facts are used to develop the main ideas. These facts are rarely important on their own account, and since many different samplings of facts can be used to develop the main idea, it is possible to use alternative sets of facts with different student groups. While concepts are to be studied repetitively and ideas need to be covered, specific facts should be sampled selectively rather than covered. An example of a specific fact is, "In some families both daddies and mommies work."

An important lesson can be learned from Taba: The development and the organization of content proceeds from concepts to main ideas and from there to specific content. However, the learning sequence is in reverse: The students start with specific instances and then develop the main idea. Concepts are formulated across many main ideas in several contexts.

These statements by Taba have important implications for career education in the elementary school. For one thing, she has told us that there is nothing wrong with using specific occupations from which to form a base for acquiring

main ideas about career education which eventually lead to career education concept formation. Of course, the one precaution that our staff would follow is that the selection of specific occupations should fall primarily within the experiential background of the K-2 child with the occasional introduction of new occupational areas to which the child has not been exposed.

I recently came across a statement in a set of career education materials for the elementary school which said that consistent with career development theory which specifies development from general to specific, elementary career education programs should focus on job families and broad interest areas instead of specific job titles. For example, rather than acquaint elementary age students with the occupation of licensed practical nurse, children should be shown how the physician, nurse, inhalation therapist, x-ray technician, nurse's aide, and dietitian interact as part of the health care team.

I am afraid in our attempts to be sophisticated in developing process-oriented curriculum we have failed to take full stock of how children learn. I certainly do not disagree that one of the main ideas that children should learn through career education programs is that workers do interact with each other. However, before main ideas can be learned, sometimes specific facts have to be presented--particularly at the elementary school level.

Yes, in keeping with Super's career development theory, we do believe that career development takes place over a number of years, that occupation choice is not a "point in time event", and that an individual chooses occupations which will allow him to function in a role consistent with his self concept. We also believe that a person is an economic being, a social being, a family being, a moral being, and a leisure being. However, we believe that in attempting to build career development programs which incorporate these concepts we must be thoroughly cognizant of how children learn. All-out attempts should be focused on developing materials which will help students learn how to become the individual they want to be and are capable of becoming.

There is no doubt about it. Many crucial decisions about content and curricular procedures for elementary school programs still have to be made. The ETC project staff is calling upon a variety of educational leaders to assist us with our efforts. Our national advisory committee consists of Dr. John Jarolimek, President, National Council for the Social Studies; Ms. Donna Childs, National President of the American Personnel and Guidance Association; Mr. Frank Burtnett, Director of the National Career Information Center, American Personnel and Guidance Association; Dr. Rupert Evans, author of numerous books and articles on vocational education and former member of several national advisory committees on vocational education; Mrs. Winifred French, assistant director in charge of K-6 career education for the Chicago Public Schools Dusable Model Project; Dr. Ronald McCage, Director, Research Unit, Illinois Division of Vocational and Technical Education; Dr. Furman Moody, Director of the National Research Directors Group; and the Honorable Roman Pucinski, Congressman from Illinois.

Our policy on past career education efforts at Eastern Illinois University has been a very open one. We have welcomed constructive criticism which has helped make our final products of better quality had we not had helpful suggestions from the education community we are serving.

Our advisory committee and our ETC staff sincerely hope that you will feel free to react to our efforts as these efforts become more formalized.

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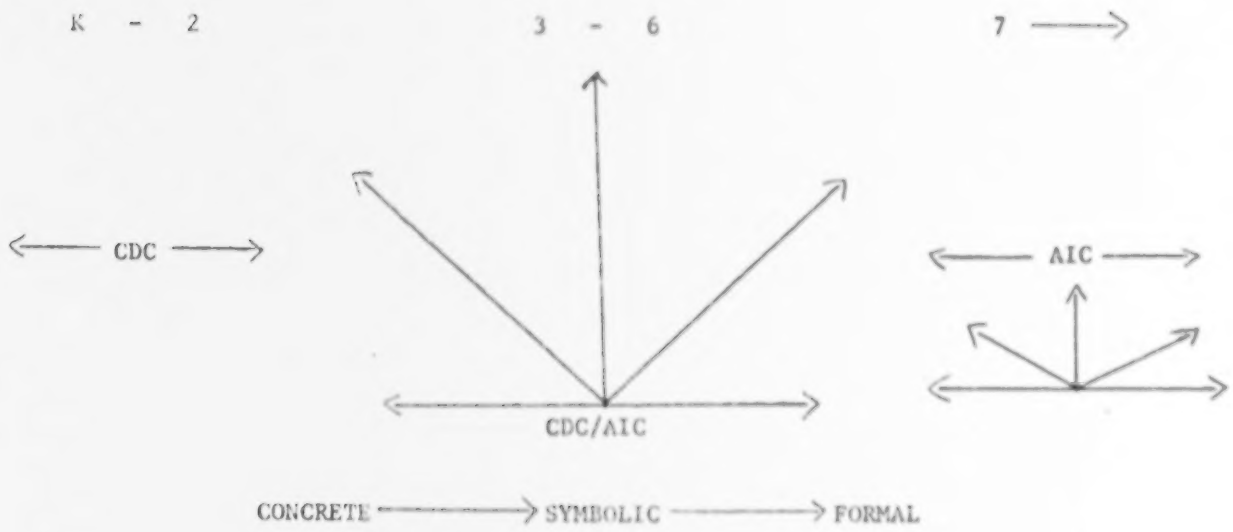
APPENDIX A

Component #1
LTC Model
A Curricular Approach to the "Child-Developed"
and "Adult-Imposed" Cluster Concepts



CDC - Child Developed Clusters
AIC - Adult Imposed Clusters

Characteristics of Occupational Areas Within Clusters

CDC - Random and sporadic. Will vary considerably from one geographic area to another and will be partially dependent upon socio-economic context of learner. Also affected by family setting. Content determined internally by classroom S's.

AIC - Prestructured and fixed. Tends to be more uniform from one geographic area to another and not so dependent upon socio-economic context of the learner. Less affected by family setting. Allows for good organization because content is externally imposed from adult logical point of view--not from psychological point of view of the child.

CDC/AIC - Is at times random and sporadic (depending upon subject matter context) and at times may be prestructured and fixed. Aids the child in moving toward an organizational framework for more intensive exploration of his life roles.